

Usage is subject to the terms and conditions of the subscription and License Agreement and the applicable Copyright and intellectual property protection as dictated by the appropriate laws of your country and/or International Convention.

No.	Records	Request
1	25008	cytotoxic
2	7316	polysaccharide
3	66	#1 and #2
4	18702	hydrophobic
5	1	#3 and #4
6	3835	CTL
7	6	#2 and #6
8	0	#4 and #7
9	31293	cholesterol
* 10	4	#6 and #9

Record 4 of 4 - BA on CD 7/97-12/97

TI: Induction of CD8+ cytotoxic T lymphocytes with MHC class I restriction by a soluble truncated oncoprotein.

AU: Gu-X; Nagata-Y

SO: Acta Medica Nagasakiensia 42(1-2): 19-24

PY: 1997

LA: English

AB: CD8+ cytotoxic T lymphocytes (CTLs), which play a major role in the immunological defense against cancer, recognize endogenously produced peptides in the context of MHC class I molecules. We investigated how to induce CD8+ CTL responses against the HER2/neu/c-erbB2 (HER2) oncoprotein often overexpressed in a wide range of human adenocarcinomas. The immunization of BALB/c mice with a syngeneic cell line transduced with HER2 cDNA led to a successful induction of CD8+ CTLs which specifically destroyed HER2-expressing tumor cells. The CTLs recognized the HER2-derived peptide 1 (TYLPTNASL, pos. 63rd-71st amino acid) in the context of MHC class I K-d. The immunization of mice with a truncated HER2 oncoprotein containing 144 amino acids of HER2 (N terminus to 144th amino acid) failed to elicit measurable CTL activity for HER2-expressing target cells. ~~We reconstituted the truncated HER2 protein into a mannan-coated liposome, and complexed the product with a cholesterol-bearing mannan polysaccharide, respectively.~~ Both of these complexes were capable of inducing killer cells specific for HER2-expressing cells in murine model after immunization. These killer cells are K-d restricted CD8+ CTLs which recognize peptide 1. The cholesterol-bearing mannan polysaccharide facilitated the induction of specific CD8+ CTLs by an exogenous HER2 oncoprotein, and may therefore be useful in the development of cancer vaccines.